

**Amendments to the Specification:**

Please replace the paragraph beginning on line 6 of page 16 of the application with the following paragraph:

“Evolutionarily conserved amino acid positions” refers to particular positions within a multiple sequence alignment which display a non-zero  $\Delta G^{\text{stat}}$  as calculated by ~~Equation 2~~ Equation 4. In general terms, this refers to positions within a sequence that have a non-random distribution of monomers. For example, if many members of a protein family have histidine at position 50, this would suggest that having histidine at position 50 is important for the protein’s function, and that it has been conserved during evolution. Conversely, if position 50 in the members of the protein family displayed a random distribution of amino acids, this would suggest that there was no requirement for any particular amino acids at this position during evolution.